

## OIB - DC-8 11/02/14 Science Report

**Aircraft:**

[DC-8](#) ([See full schedule](#))

**Date:**

Sunday, November 2, 2014

**Mission:**

OIB

**Mission Location:**

Antarctica

**Mission Summary:**

### F09 Hull Land 04

#### Accomplishments

- Low-altitude survey (1,500 ft AGL) over Hull Land and Hobbs Coast.
- ATM, albedo, KT-19, snow, Ku-band, MCoRDS, gravimeter, and DMS were operated on the survey lines.
- Ramp pass at Punta Arenas airport after takeoff at 1,300 ft AGL.
- Satellite tracks: none.
- Repeat Mission: new mission with some 2011 LVIS repeats inland of the Getz Ice Shelf.

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	26 GB	None.
CAMBOT	yes	43 GB	None.
DMS	yes	34 GB	None. Recorded 4,657 frames.
Snow Radar	yes	214 GB	None.
Ku-band Radar	yes	214 GB	None.
MCoRDS	yes	0.9 TB	None. Amplifier exchanged. New calibration data collected on transits.
KT-19	yes	10 MB	None.
Albedo	yes	2.2 GB	None.
Albedo camera	yes	500 MB	None.
Gravimeter	yes	1.8 GB	None.

#### Mission Report (Michael Studinger, Mission Scientist)

Today's flight is a new mission plan and designed to map the coastal region encompassing the Hull and Land glaciers and surrounding areas to the west of the Getz Ice Shelf. The twofold purpose is to map the bathymetry and basal topography using the gravimeter and MCoRDS radar, and at the same time to establish surface topography measurements for dh/dt. This particular flight is the second most inboard of the five planned flights, and it includes a centerline run of the Land Glacier and a nearby tie line. In addition to this we collected opportunistic data along two lines inland of the Getz Ice Shelf that have been flown with LVIS previously.

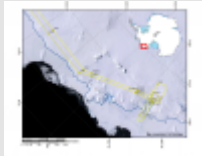
The areas with promising weather forecasts today were the Getz Ice Shelf/Hull Land and Slessor Glacier area. Both, Slessor Glacier and Getz Ice Shelf looked problematic and conditions over Hull Land/Hobbs Coast were much better.

The conditions in the survey area were good. ATM got 100% surface returns during the low altitude portion of the survey. The opportunistic high altitude segments had some low clouds but we were able to get some good data as well.

LiDAR data collection started 11/02/2014 15:51 UTC and ended at 19:23 UTC. In total we collected 3.5 hours of LiDAR data.

**Images:**

## Figure 1: Today's trajectory in yellow.



[Read more](#)

### Submitted by:

Michael Studinger on 11/02/14

### Related Flight Report:

## DC-8 11/02/14

### Flight Number:

150116

### Payload Configuration:

Operation IceBridge 2014

### Nav Data Collected:

Yes

### Total Flight Time:

10.9 hours

### Submitted by:

Frank Cutler on 11/03/14

### Flight Segments:

<b>From:</b>	SCCI	<b>To:</b>	SCCI
<b>Start:</b>	11/02/14 11:55 Z	<b>Finish:</b>	11/02/14 22:48 Z
<b>Flight Time:</b>	10.9 hours		
<b>Log Number:</b>	<a href="#">158003</a>	<b>PI:</b>	Michael Studinger
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	Purpose of Flight: OIB 2014 Science Flight ? Hull Land 04 at 1,500 ft AGL Aircraft Status: Airworthy Sensor Status: All instruments operated Significant Issues: None Accomplishments: Takeoff at 306 11 55 19 Land 306 22 48 38 After takeoff accomplish a calibration ramp pass at 1204Z and 1300Z agl. Climb to transit altitude of FL350. Start data recording at 1557Z while at FL350. Start descent at 1627Z, level at 1500? agl at 1640Z. At 1743Z transition to 2000? agl. Perform radar instrument pitch calibrations at 1742Z. At 1743Z transition to 1500? agl. Complete low altitude data lines at 1840Z, start climb to FL350, level at FL350 at 1856Z. Continue to collect data at altitude until 1920Z. Climb to FL390 for transit to SCCI. Planned events: Continue science flights out of Punta Arenas, Chile		

### Flight Hour Summary:

					<b>158003</b>
<b>Flight Hours Approved in SOFRS</b>					300
<b>Total Used</b>					292.1
<b>Total Remaining</b>					7.9
<b>158003 Flight Reports</b>					
<b>Date</b>	<b>Flt #</b>	<b>Purpose of Flight</b>	<b>Duration</b>	<b>Running Total</b>	<b>Hours Remaining</b>
<a href="#">10/06/14</a>	150101	Science	1.2	1.2	298.8
<a href="#">10/07/14 - 10/08/14</a>	150102	Science	5.2	6.4	293.6
<a href="#">10/08/14</a>	150103	Science	3.7	10.1	289.9

<a href="#">10/13/14</a>	150104	Transit	10.4	20.5	279.5
<a href="#">10/13/14</a>	150105	Transit	3.2	23.7	276.3
<a href="#">10/16/14</a>	150106	Science	11	34.7	265.3
<a href="#">10/18/14 - 10/19/14</a>	150107	Science	11.9	46.6	253.4
<a href="#">10/20/14</a>	150108	Science	11.7	58.3	241.7
<a href="#">10/23/14</a>	150109	Science	11.8	70.1	229.9
<a href="#">10/25/14</a>	150110	Science	11.4	81.5	218.5
<a href="#">10/26/14 - 10/27/14</a>	150111	Science	11.9	93.4	206.6
<a href="#">10/28/14</a>	150112	Science	11.5	104.9	195.1
<a href="#">10/29/14</a>	150113	Science	10.9	115.8	184.2
<a href="#">10/31/14</a>	150114	Maintenance	2.8	118.6	181.4
<a href="#">11/01/14</a>	150115	Maintenance	3	121.6	178.4
<a href="#">11/02/14</a>	150116	Science	10.9	132.5	167.5
<a href="#">11/03/14</a>	150117	Science	11.1	143.6	156.4
<a href="#">11/05/14</a>	150118	Science	11.4	155	145
<a href="#">11/06/14</a>	150119	Science	11.1	166.1	133.9
<a href="#">11/07/14</a>	150120	Science	10.9	177	123
<a href="#">11/08/14</a>	150121	Science	11.4	188.4	111.6
<a href="#">11/10/14</a>	150122	Science	11.2	199.6	100.4
<a href="#">11/11/14</a>	150123	Science	11.2	210.8	89.2
<a href="#">11/13/14</a>	150124	Science	11.4	222.2	77.8
<a href="#">11/14/14</a>	150125	Science	11.5	233.7	66.3
<a href="#">11/15/14</a>	150126	Science	11.2	244.9	55.1
<a href="#">11/16/14</a>	150127	Science	11.1	256	44
<a href="#">11/21/14</a>	150128	Science	11.2	267.2	32.8
<a href="#">11/22/14</a>	150129	Science	10.8	278	22
<a href="#">11/24/14</a>	150130	Transit	2.9	280.9	19.1
<a href="#">11/25/14 - 11/26/14</a>	150131	Transit	11.2	292.1	7.9

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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